



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,338	10/16/2001	Mark T. Monnett	2879	5534

7590

12/24/2003

Joseph N. Hosteny
Niro, Scavone, Haller & Niro
Suite 4600
181 W. Madison
Chicago, IL 60602

EXAMINER

HA, NGUYEN T

ART UNIT	PAPER NUMBER
----------	--------------

2831

DATE MAILED: 12/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/981,338	MONNETT, MARK T.	
	Examiner	Art Unit	
	Nguyen T Ha	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show a riser (11a), and insulating header (2) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: element 13. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claim Objections

4. The claims must commence on a separate sheet and appear after the detailed description at the invention, see MPEP 608.01(m).
5. Claim 4 is objected to because of the following informalities:

Claim 4, line 1, "claim" is indefinite. It is suggested to applicant to change to - -
claim 1- -. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1, lines 11-12, the applicant should clarify the arrangement intended by the non-conductive gasket being between the electrolyte and the header surrounding a portion of the anode not in contact with electrolyte.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oney (US 5,777,840) in view of Rogers (US 4,523,255).

Regarding claim 1, **Oney as best understood**, discloses an electrolytic capacitor (10) comprising:

- a tantalum case (12);
- a tantalum anode/tantalum electrode slug (22);
- a dielectric layer on the anode (column 2, lines 9-13);
- an electrolyte (32) in contact with the dielectric layer on the anode;
- an insulating header (38) in an open end of the case and electrically isolating the anode and the case;
- a riser/lead wire (26) extending through the header and attached to a first lead (28);
- a non-conductive gasket/seal (34) inside the case between the electrolyte and the header (38) surrounding a portion of the anode not in contact with the electrolyte; and
- a second lead (30) of opposite polarity from the first lead, lead attached to the case (figure 1).

Oney lacks:

- a layer of tantalum carbide on an inner surface of the case; and

- a layer of activated carbon between the layer of tantalum carbide and the electrolyte.

Rogers teaches: an electrolytic capacitor (figures 1-2) having a layer of tantalum carbide (14) on an inner of a case (10), and a layer of finely-divided carbon (15) on the carbide layer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Oney tantalum capacitor to have a layer of tantalum carbide on an inner of a case, and a layer of finely-divided carbon on the carbide layer as taught by Rogers in order to provide good electrical contact.

Regarding claim 2, Oney discloses the electrolyte being a liquid electrolyte (column 2, lines 33-34).

Regarding claim 3, Oney discloses the electrolyte being a gel electrolyte (column 2, lines 33-34).

Regarding claim 4, Oney discloses the gasket having a seal (36) on the periphery of the gasket.

Regarding claim 5, Oney discloses a capacitor (10) comprising:

- an anode/tantalum electrode slug (22);
- a dielectric layer on the anode (column 2, lines 9-13);
- an electrolyte (32) adjacent to the dielectric layer;
- a metal case (12) surrounding the anode.

Oney lacks:

Art Unit: 2831

- an interface carbide layer on an inner surface of the case formed by heating graphite in contact with the case to an elevated temperature in the substantial absence of oxygen; and
- a layer of activated carbon on the side of the interface layer away from the case, the activated carbon being in contact with the electrolyte.

Rogers teaches: an electrolytic capacitor (figures 1-2) having a layer of tantalum carbide (14) on an inner of a case, and a layer of finely-divided carbon (15) on the carbide layer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Oney tantalum capacitor to have a layer of tantalum carbide on an inner of the case, and a layer of finely-divided carbon on the carbide layer as taught by Rogers in order to provide good electrical contact.

Regarding claim 6, Oney discloses the electrolyte being a liquid electrolyte (column 2, lines 9-13).

Regarding claim 7, Oney discloses the electrolyte being a gel electrolyte (column 2, lines 9-13).

Regarding claim 8, Oney as modified, shows all the claimed limitations with respect to claim 5 above. **Rogers further teaches** the coating the carbide layer with a dispersion of finely-divided carbon at a temperature is about 900 °C to about 1040 °C (column 4, lines 59-60, which is within the claimed range).

Regarding claim 9, Oney discloses a cup-shaped cylindrical case having two ends (figure 1), and an open end (16) being closed by a header with the anode projecting through the header.

Conclusion

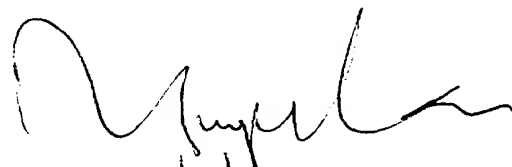
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T Ha whose telephone number is 703-308-6023. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 703-308-3682. The fax phone number for the organization where this application or proceeding is assigned is 703-305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Nguyen T. Ha

December 11, 2003



12/11/03